

HKU CICID Workshop: Lean Construction for Improving Productivity in the Hong Kong Construction Industry

BIM and Mobile Technology for Construction Wastage Reduction

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Minimize the 7 Wastages by 4D BIM Virtual Construction Simulation

Transportation
(eg from one laydown
area to another)



Waiting
(eg for materials, sign off,
previous work)



Inventory
(over or under)



Overproduction
(eg not on critical path)



WORMPIT

Over processing
(eg painting 3 times
when 1 will do)



Repair / rework
(eg re-welding
rectifying)



Motion
(eg to worksite / materials)



Eliminate the Non-Value Added Operations

MTECH Consulting Services



As-Construction BIM Simulation of the 6-day Cycle

Hong Kong Housing Authority Project

The screenshot displays the Cortona3D software interface. The main view shows a 3D BIM model of a building under construction, with various components highlighted in different colors (red, green, yellow). A legend on the right indicates 'Deactivated' (yellow) and 'Activated' (green) components. The interface includes a browser window at the top with the URL 'E:\Saleskit\Cortona3d\Demo\AEC\6 Days Cycle V2\6 Days Cyc...' and a search bar. The bottom of the interface features a taskbar with various application icons and a system tray showing the date and time as 18:37 on 2013/8/11.

		Day 1													
		7:30-8:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00		
Wing A&B	Steel bar lifting (wall)	Facade lifting / wall re-inforcement	VPB lifting / wall re-inforcement	Pipe sleeve/ conduit laying	Site inspection/steel formwork fixing/steel formwork moving				Adjust steel formwork						
Wing C										Working platform raised	Slab lifting, falsework erection, plywood laying				
C.Core A				Sta-ir	Steel bar	Re-inforcement to the wall, conduit works and pipe sleeve fixing : site inspection							C.core steel f		
C.Core											Falsework ere				



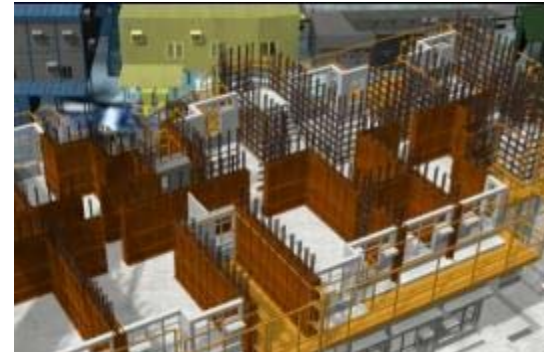
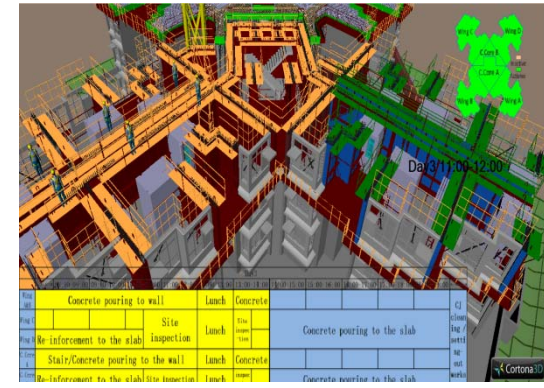
6 Days Cycle Co-ordination

The Management of

PPR

Objectives

- Construction sequence analysis
 - Human resources planning
 - Productivity forecast
- Site layout for logistic and inventory
- Conflict management
- Safety analysis
- Co-ordination





First Time Quality – Mobile Apps for Construction Management



www.aproplan.com



Streamline the Working Process by Mobile and Cloud Computing

ZERO TIME



ZERO DISTANCE

Instant Collaboration



Framework for Getting Simple

Complete on Clarity

- Change how time is used
- 3D for ALL
- Engaging everyone

Smart Design Work

- Simpler to know, use, do & succeed
- Acting and thinking in the "living reality"

Lead Through Navigation

- Structure the project operation according to the questions people ask – Working Dashboard





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IT'S ONE THING TO HAVE THE TECHNOLOGY AT YOUR FINGERTIPS AND USE IT TO IT'S FULL EXTENT. SOME PEOPLE JUST LIKE TO DO THINGS THE WAY THEY HAVE ALWAYS DONE IT, EVEN IF IT'S INEFFICIENT, COSTLY AND NOT VERY ACCURATE.